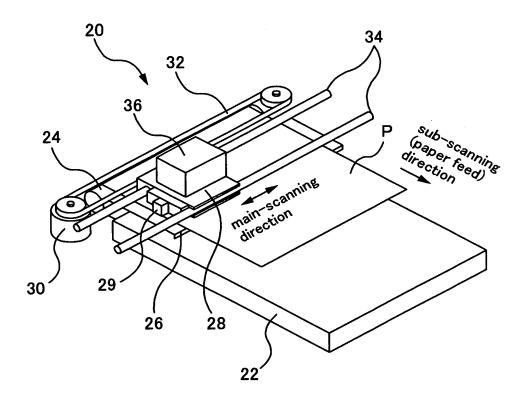Koichi OTSUKI Q85515
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21

95 — application → video driver — 91 — 90

96

image data

97 — resolution conversion module

98 — color conversion module → color conversion lookup table — LUT

103 — dither table

104 — error memory ↔ halftone module — 99

105 — gamma table

user interface display module — 101

rasterizer — 100

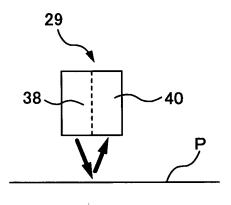UI printer interface module — 102

PD,COM

COM

20

P

FIG. 1

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FIG. 2

29

38

40

P

FIG. 3

28

32

31

25

11

30

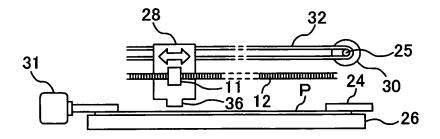36   12   P   24

26

FIG. 4

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FIG. 5

FIG. 6

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FIG. 7

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FIG. 8

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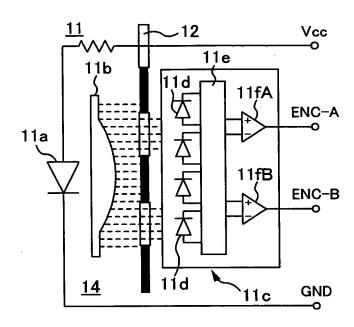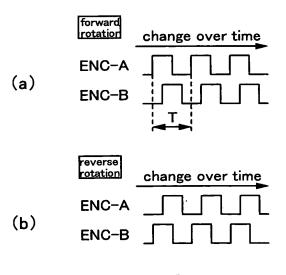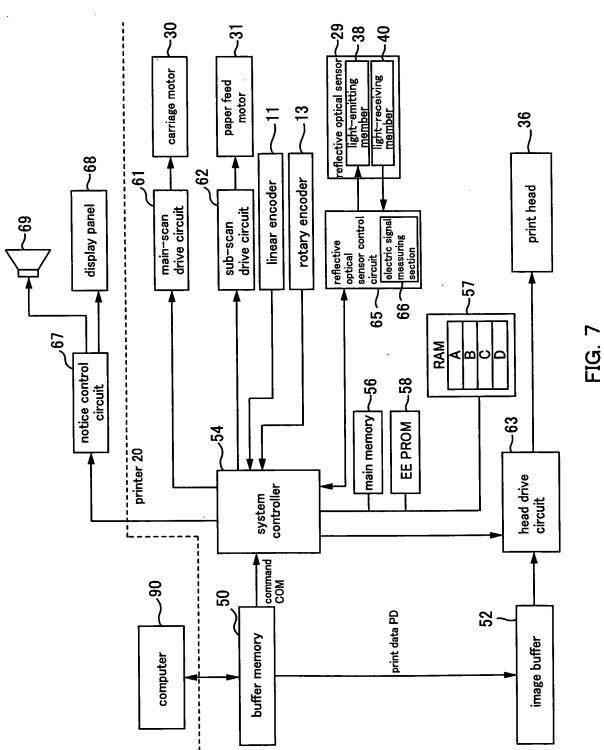Darryl Mexic 202-293-7060
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START

output print order — S2

write print data PD and width W1
of the image to be printed to
addresses A and B of the RAM — S4

drive PF motor to carry print paper P
in the sub-scanning direction — S6

electric signal
"H" to "L"? — S8
NO
YES — S10

stop driving PF motor — S10

drive PF motor to carry print paper P
up to the print start position
in the sub-scanning direction — S12

drive CR motor to move carriage
from the initial position to the left of
the left edge of the print paper P — S14

drive CR motor to move carriage
up to the right edge of print paper P — S16

electric signal
"H" to "L"? — S18
NO
YES — S20

write the count value of linear encoder
to address C of the RAM — S20

electric signal
"L" to "H"? — S22
NO
YES — S24

write the count value of linear encoder
to address D of the RAM — S24

find width W2 of print paper P and
write it to address E of the RAM — S26

drive CR motor to move carriage
up to the print start position — S28

is width W1 > width W2? — S30
NO
YES

supply, to image buffer,
print data PD as they are — S34

supply, to image buffer, print data PD
in which dot information corresponding
to width W1 − W2 has been
overwritten by logic value "D" — S32

execute printing — S36

electric signal
"L" to "H"? — S38
NO
YES

stop supplying print data PD
to image buffer — S40

discharge the print paper P — S42

drive CR motor to move
carriage to the initial position — S44

END

FIG. 9

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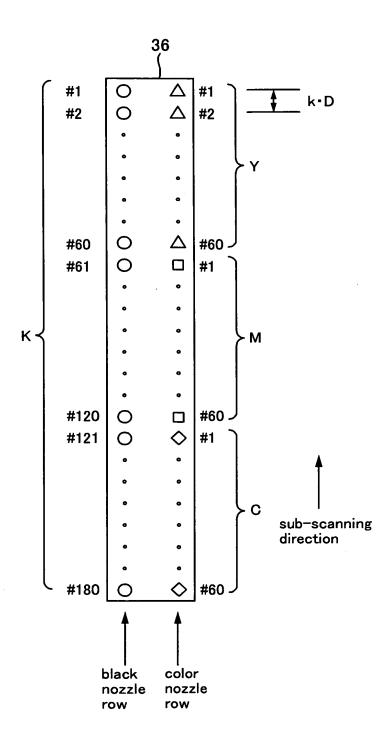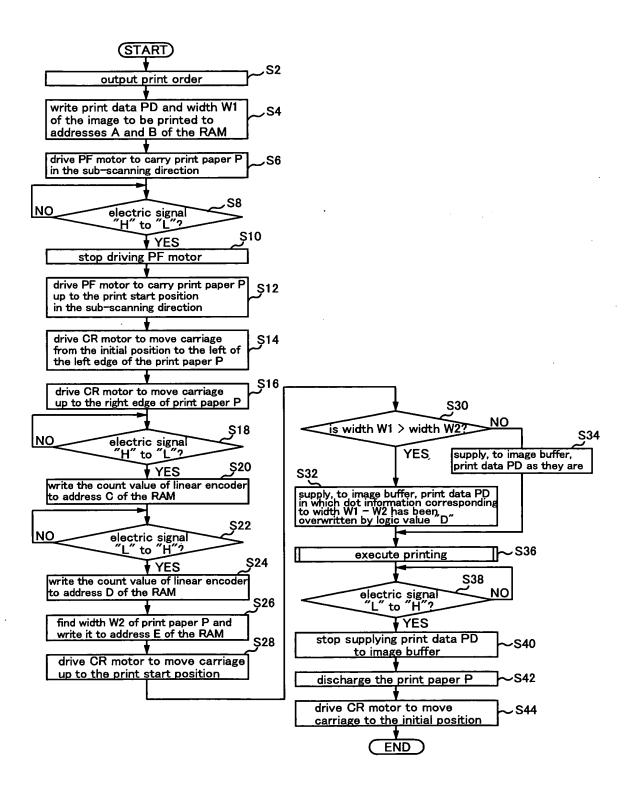Darryl Mexic   202-293-7060
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(a) initial position

(b)

(c) x

(d)

(e) detect paper width

(f)

start printing in accordance with paper width

(g) detect lower edge

(h)
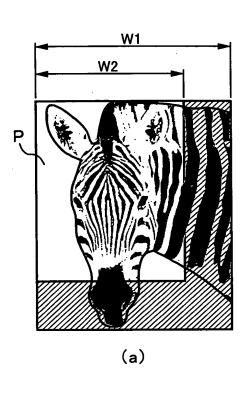
initial position

FIG. 10

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(a)

(b)

(c)

FIG. 11

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START

output print order   S102

write setting width w1 of print
paper to address A of the RAM   S104

drive PF motor to carry print paper P
in the sub-scanning direction   S106

electric signal
"H" to "L"?   S108   NO

YES   S110

stop driving PF motor

drive PF motor to carry print paper P
up to the print start position
in sub-scanning direction   S112

drive CR motor to move carriage from
the initial position to the left of
the left edge of print paper P   S114

drive CR motor to move carriage up to
the right edge of the print paper P   S116

electric signal
"H" to "L"?   S118   NO

YES   S120

write the count value of linear encoder
to address B of the RAM

electric signal
"L" to "H"?   S122   NO

YES   S124

write the count value of linear encoder
to address C of the RAM

find width W2 of print paper P and
write it to address D of the RAM   S126

W1 ≠ W2   S128   NO

YES

output notice control signal   S130

stop printing   S132

drive CR motor to move carriage
to the print start position   S134

execute printing   S136

drive CR motor to move carriage
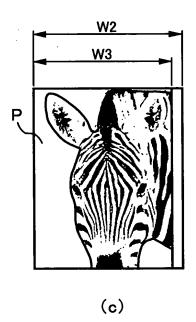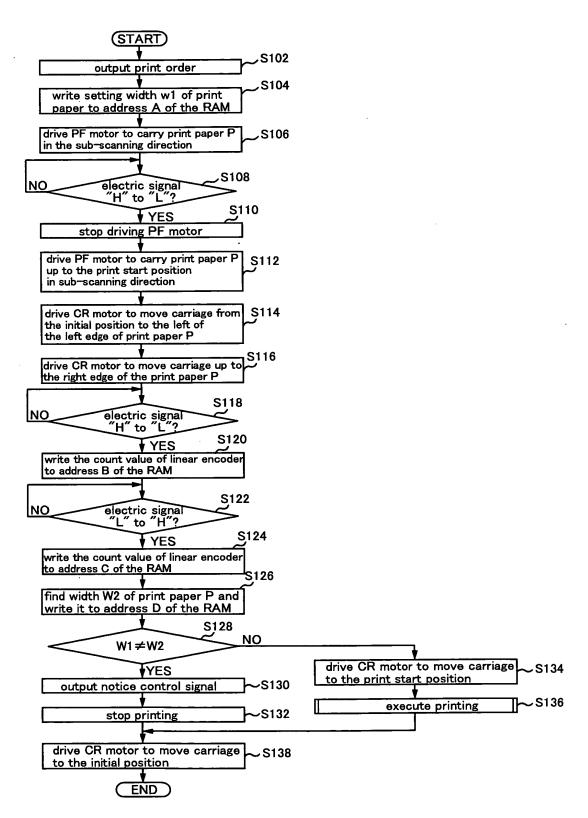to the initial position   S138

END

FIG. 12

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initial position

(a)

P

(b)

P ↑

(c)

P ↑

X

(d)

P

(e)

P

detect paper width

(f)

P

start printing in accordance with paper width
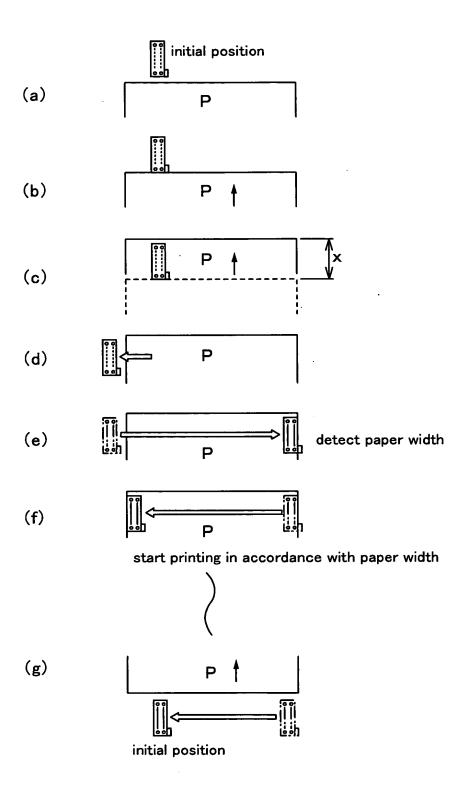
(g)

P ↑

initial position

FIG. 13

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CRT display screen example

print paper	print mode	print resolution (dpi)	ON/OFF setting check boxes	
normal paper	text characters	360 × 360	○ ON	● OFF
	graph	720 × 720	● ON	○ OFF
	photograph	720 × 720	● ON	○ OFF
matte paper	text characters	360 × 360	○ ON	● OFF
	graph	720 × 720	● ON	○ OFF
	photograph	1440 × 720	● ON	○ OFF
photograph paper	photograph	1440 × 720	● ON	○ OFF
OHP paper	text characters	360 × 360	○ ON	● OFF
	graph	720 × 720	● ON	○ OFF

FIG. 14

data table stored in a memory of computer 90

print paper	print mode	ON/OFF setting check boxes
normal paper	text characters	OFF
	graph	ON
	photograph	ON
matte paper	text characters	OFF
	graph	ON
	photograph	ON
photograph paper	photograph	ON
OHP paper	text characters	OFF
	graph	ON

FIG. 15

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START

output print order ⟋S202

is ON/OFF setting check box "ON"? ⟋S204 — **NO**

↓ **YES**

write setting width w1 of print paper to address A of the RAM ⟋S206

drive PF motor to carry print paper P in sub-scanning direction ⟋S208

electric signal "H" to "L"? ⟋S210 — **NO**

↓ **YES**

stop driving PF motor ⟋S212

drive PF motor to carry print paper P up to the print start position in sub-scanning direction ⟋S214

drive CR motor to move carriage from the initial position to the left of the left edge of the print paper P ⟋S216

drive CR motor to move carriage up to the right edge of the print paper P ⟋S218

electric signal "H" to "L"? ⟋S220 — **NO**

↓ **YES**

write the count value of linear encoder to address B of the RAM ⟋S222

electric signal "L" to "H"? ⟋S224 — **NO**

YES

write the count value of linear encoder to address C of the RAM ⟋S226

find width W2 of print paper P and write it to address D of the RAM ⟋S228

$W1 \neq W2$ ⟋S230 — **NO**

↓ **YES**

output notice control signal ⟋S232

stop printing ⟋S234

drive CR motor to move carriage to the print start position ⟋S236

execute printing ⟋S238

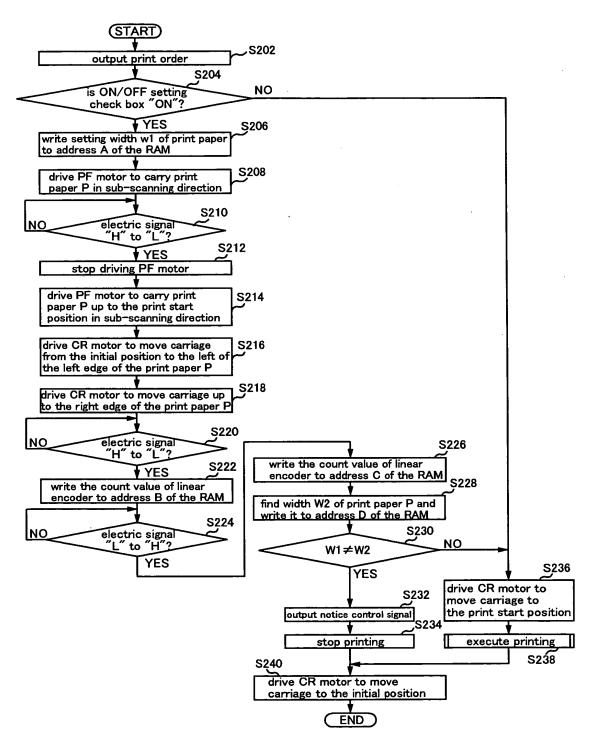drive CR motor to move carriage to the initial position ⟋S240

END

FIG. 16

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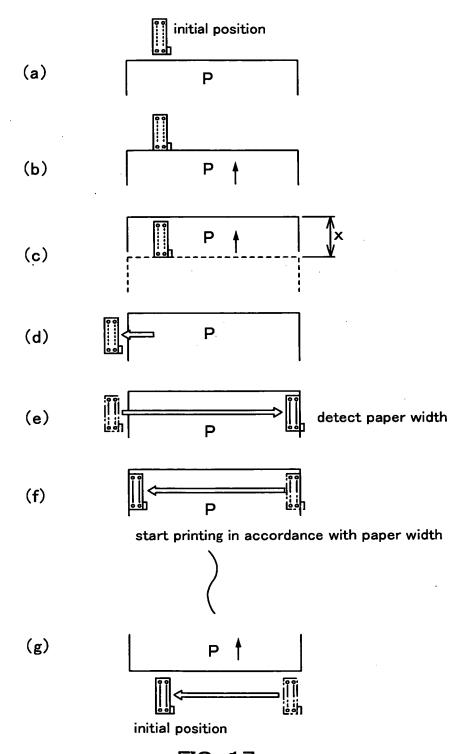Darryl Mexic   202-293-7060
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(a)

initial position

P

(b)

P ↑

(c)

P ↑   x

(d)

P

(e)

P   detect paper width

(f)

P

start printing in accordance with paper width

(g)

P ↑

initial position

FIG. 17